What is claimed is:

1. A disk drive, comprising:

a disk having a plurality of concentric tracks upon a surface of the disk for storing data, said disk including a first track having a first data pattern with a first frequency and a second data pattern with a second frequency that is higher than the first frequency;

a spin motor for rotating said disk at a substantially constant angular velocity;

a head for use in transferring data between a predetermined track of said disk and an exterior environment when said head is positioned above said predetermined track, wherein the ability of said head to transfer data between said predetermined track and said exterior environment is dependent upon the vertical distance between an air bearing surface of said head and said disk surface during said data transfer, wherein said vertical distance is measured along a normal line to said disk surface;

positioning means for radially positioning said head with respect to said disk in response to a control signal;

means for creating a first analog signal by reading said first data pattern using said head, while said air bearing surface of said head is at an unknown vertical distance from said disk surface;

means for creating a second analog signal by reading said second data pattern using said head, while said air bearing

surface of said head is at substantially the same unknown vertical distance above said disk surface; and

means for determining whether said unknown vertical distance of said head is within an acceptable range for performing a transfer of user data between said first track and said exterior environment using said first analog signal and said second analog signal, wherein said means for determining does not require movement of said head to a substantially different vertical distance to make said determination.

2. The disk drive, as claimed in Claim 1, wherein:

said means for determining determines whether said unknown vertical distance is within said range based on read signal resolution.

3. The disk drive, as claimed in Claim 2, wherein:

said means for determining includes means for calculating read signal resolution based on a ratio between a magnitude of said first analog signal and a magnitude of said second analog signal.

4. The disk drive, as claimed in Claim 1, wherein:

said means for determining includes means for comparing a calculated read signal resolution value to a threshold resolution value.

5. The disk drive, as claimed in Claim 1, wherein:

said means for determining includes means for storing a plurality of threshold resolution values, wherein each stored value corresponds to a different region on said disk surface.

6. The disk drive, as claimed in Claim 1, wherein:

at least one of said first data pattern and said second data pattern is located in a servo data portion of said first track.

7. The disk drive, as claimed in Claim 6, wherein:

at least one of said first data pattern and said second data pattern is located in a standard servo field in said servo data portion.

8. The disk drive, as claimed in Claim 7, wherein:

said standard servo field includes at least one of the following: an automatic gain control (AGC) field; a C burst field, and a D burst field.

9. The disk drive, as claimed in Claim 7, wherein:

said first data pattern is located in an AGC field and said second data pattern is located in one of a C burst field and a D burst field.

10. The disk drive, as claimed in Claim 7, wherein:

said first data pattern and said second data pattern are both located in the same servo field.

11. The disk drive, as claimed in Claim 1, wherein:

said first data pattern and said second data pattern are both located in a single servo sector on said first track, said single servo sector being associated with a data area on said first track that is adjacent to said single servo sector so that said head first traverses said single servo sector and then immediately traverses said associated data area on any particular revolution of said disk; and

said disk drive further comprises means for postponing a transfer of data from/to said associated data area if said means for determining determines that said unknown vertical distance is not within said acceptable range.

12. The disk drive, as claimed in Claim 1, wherein:

said second analog signal includes indicia corresponding to transitions in said second data pattern; and

said means for determining includes means for detecting said indicia in said second analog signal.

13. The disk drive, as claimed in Claim 12, wherein:

said means for detecting indicia includes at least one of the following: an analog peak detector, a PRML channel, a

decision feedback equalizer, and a finite delay tree search unit.

14. The disk drive, as claimed in Claim 12, wherein:

said indicia includes a predetermined number of peaks in said second analog signal; and

said means for detecting includes peak detection means.

15. The disk drive, as claimed in Claim 14, wherein:

said peak detection means may detect less than said predetermined number of peaks in said second analog signal portion due to read signal resolution effects that result in reduced peak amplitudes at higher frequencies.

16. The disk drive, as claimed in Claim 15, wherein:

said means for determining includes means for determining the magnitude of said unknown vertical distance based upon the number of peaks detected and not detected by said peak detection means.

17. The disk drive, as claimed in Claim 12, wherein:

said second data pattern is substantially centered on said predetermined track and includes one of the following: a constant frequency pattern, a random pattern, and a linearly increasing frequency pattern.

18. The disk drive, as claimed in Claim 1, wherein:

said means for determining includes a read channel located between said head and said exterior environment for processing said first and said second analog signal portions during the determination process and means for configuring said read channel, during the determination process, to enhance the ability of said means for determining to determine whether said head is within said acceptable distance from said disk surface.

19. A disk drive, comprising:

a disk having a plurality of concentric tracks upon a surface of the disk, wherein each track includes at least one servo sector for storing head positioning data and at least one data sector for storing user data;

a motor for rotating said disk at a substantially constant angular velocity;

a head for use in transferring data between a predetermined track of said disk and an exterior environment, wherein the ability of said head to transfer data between said predetermined track and said exterior environment is dependent upon the vertical distance between said head and said disk surface during said data transfer, wherein said vertical distance is measured along a normal line to said disk surface;

an actuator assembly for radially positioning said head with respect to said disk in response to a control signal;

means for determining, while said head is located above said predetermined track, whether said head is currently within an acceptable vertical distance range from said disk surface for performing a transfer of user data between said predetermined track and said exterior environment, wherein said means for determining makes said determination before said transfer of user data is allowed to occur; and

means for postponing said transfer of user data when said head is determined to be outside of said acceptable vertical distance range by said means for determining.

20. The disk drive, as claimed in Claim 19, wherein:

said means for determining operates substantially in real time so that, on a single revolution of said disk, said determination is made before said head reaches a data sector on said predetermined track with which said transfer of user data is to take place.

21. The disk drive, as claimed in Claim 19, wherein:

said predetermined track includes a first data pattern at a first frequency and a second data pattern at a second frequency that is greater than said first frequency;

said disk drive further includes means for creating a first analog signal and a second analog signal by sensing said first data pattern and said second data pattern, respectively, using said head; and

said means for determining includes means for calculating a read signal resolution value using a magnitude of said first analog signal and a magnitude of said second analog signal.

22. The disk drive, as claimed in Claim 21, wherein:

said means for determining includes means for comparing said calculated read signal resolution value to a predetermined limit value.

23. The disk drive, as claimed in Claim 19, wherein said means for determining includes:

means for reading a data pattern having a predetermined length from said predetermined track to produce an analog read signal;

means for detecting peaks in said analog read signal; and

means for counting the number of peaks detected by said means for detecting to produce a peak count value.

24. The disk drive, as claimed in Claim 23, wherein:

said means for determining includes means for comparing said peak count value to a predetermined value.

25. The disk drive, as claimed in Claim 19, wherein:

said means for determining does not change the current vertical distance between said head and said disk surface to perform said determination.

26. A disk drive capable of determining whether a present flying height of a head above a surface of a disk in said disk drive is within an acceptable range for transferring user data between said disk and an exterior environment, comprising:

a disk having a plurality of concentric tracks, said disk including a first pattern having a first frequency and a second pattern having a second frequency, wherein said second frequency is greater than said first frequency;

a head for use in transferring data to/from said disk;

means for reading said first pattern using said head to create a first analog waveform having a first magnitude value;

means for reading said second pattern using said head to create a second analog waveform having a second magnitude value;

means for combining said first magnitude value and said second magnitude value to create a read signal resolution related value; and

means for comparing said read signal resolution related value to a threshold value.

27. The disk drive, as claimed in Claim 26, wherein:

said threshold value is based on a minimum read signal resolution that will produce an acceptable performance in said disk drive while transferring user data between said disk and said exterior environment.

28. The disk drive, as claimed in Claim 26, wherein:

said means for comparing includes means for storing a plurality of threshold values, wherein each threshold value corresponds to a predetermined portion of said disk surface.

29. The disk drive, as claimed in Claim 28, wherein:

said means for comparing includes means for retrieving a threshold value corresponding to a track currently being accessed from said means for storing.

30. A disk drive capable of determining whether a present flying height of a head above a disk surface is within a desired range, comprising:

a disk having a plurality of concentric tracks, said disk including a first track having a first data pattern with a first frequency;

a head for use in transferring data to/from said disk;

means for reading said first data pattern, using said head, to produce an analog read signal having a predetermined number of peaks representative of data on said disk surface;

means for processing said analog read signal to determine which of said peaks in said analog read signal meet a predetermined detection criterion, wherein less than all of said predetermined number of peaks will meet said predetermined detection criterion when said head is not within said desired flying height range due to relatively low read signal resolution at said first frequency, said means for processing creating an output signal; and

means for determining whether the flying height of said head is within said desired range based on said output signal of said means for processing.

31. The disk drive, as claimed in Claim 30, wherein:

said means for processing determines how many of said peaks in said analog read signal meet said predetermined

detection criterion, said means for processing producing a peak count value.

32. The disk drive, as claimed in Claim 31, wherein:

said means for determining includes means for comparing said peak count value to a threshold count value, wherein said threshold count value represents a minimum count value that will result in an acceptable read/write performance of said disk drive.

33. The disk drive, as claimed in Claim 32, wherein:

said means for comparing includes data storage means for storing at least one threshold count value.

34. The disk drive, as claimed in Claim 33, wherein:

said data storage means stores a plurality of threshold count values, wherein each stored value corresponds to a predetermined region on the disk surface.

35. The disk drive, as claimed in Claim 31, wherein:

said means for determining includes means for comparing said peak count value to a table of predetermined count values each having a corresponding flying height value, to determine an actual present flying height value.

36. The disk drive, as claimed in Claim 30, wherein:

said first data pattern includes a variable frequency data pattern.

37. The disk drive, as claimed in Claim 36, wherein:

said variable frequency data pattern includes a data pattern having a linearly increasing frequency.

38. The disk drive, as claimed in Claim 37, wherein:

said means for processing includes means for determining a cutoff frequency within said linearly increasing frequency data pattern above which peaks in a corresponding analog read signal do not meet said predetermined detection criterion.

39. The disk drive, as claimed in Claim 38, wherein:

said means for determining includes means for comparing said cutoff frequency to a predetermined threshold cutoff frequency.

40. The disk drive, as claimed in Claim 36, wherein:

said variable frequency data pattern includes a random pattern that, when read by said head, results in a peak count that is substantially proportional to the flying height of said head.

41. The disk drive, as claimed in Claim 40, wherein:

said random pattern is developed by empirical means.

42. The disk drive, as claimed in Claim 30, wherein: said means for processing includes a transition detector.

43. The disk drive, as claimed in Claim 42, wherein: said transition detector includes one of the following: an analog peak detector, a PRML channel, a decision feedback equalizer, and a finite delay tree search unit.

44. A disk drive, comprising:

a disk having a plurality of concentric tracks upon a surface of said disk for storing data;

a motor for rotating said disk at a substantially constant angular velocity;

a head for use in reading/writing data from/to a predetermined track of said disk when said head is positioned above said predetermined track, wherein the ability of said head to transfer data from/to said predetermined track is dependent upon a vertical distance between an air bearing surface of said head and said disk surface during said data transfer, wherein said vertical distance is measured along a normal line to said disk surface;

positioning means for radially positioning said head with respect to said disk, in response to a control signal; and

a read channel, located between said head and an exterior environment, for processing data being read from said predetermined track by said head, said read channel including means for determining whether said head is within an acceptable distance from said disk surface for performing a transfer of user data between said predetermined track and said exterior environment.

45. The disk drive, as claimed in Claim 44, wherein:

said channel, including said means for determining, is implemented on a single semiconductor chip.

46. The disk drive, as claimed in Claim 44, wherein:

said channel includes a plurality of variable channel parameters and means for changing the value of at least one of said variable channel parameters when said means for determining is performing the determination function, wherein the new value of said at least one variable channel parameter is chosen to enhance said determination function.